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Brenda Lynn Dietrich

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MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC

8321 OLD COURTHOUSE ROAD

SUITE 200

VIENNA, VA 22182-3817

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRENDA LYNN DIETRICH

Appeal 2007-0815
Application 09/850,383
Technology Center 3600

Decided: January 31, 2008

Before MURRIEL E. CRAWFORD, HUBERT C. LORIN, and
ANTON W. FETTING, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Brenda Dietrich (Appellant) seeks our review under 35 U.S.C. § 134 of the final rejection of claims 1-19. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM.

THE INVENTION

The Appellant's claimed invention is directed to a "method for considering constraints imposed by the participants in auctions for multiple items." (Specification 1:4-5.) Appellant's process involves taking into account constraints bidders or sellers may place on the items being auctioned rather than constraints that may be imposed on the manner of conducting the auction. "This invention is not concerned with the particular bidding rules of the auction, only with the methods and systems used to select the winning bids." (Specification 15:6-7.) "The method and system described in this invention are applicable independent of the form of the authorization rules." (Specification 15:10-11.)

The types of constraints which the method can consider include a budget constraint "that specifies the total amount the bidder is willing to pay for a collection of items on which he has placed bids" (Specification 5:13-14), a maximum quantity constraint which "provides a generalization of the concept of substitutability" for the case of similar items (Specification 5:17-19), a minimum quantity constraint "to represent factors such as economies of scale by the bidder" (Specification 6:1-2), and a precedence constraint "used to indicate that a bidder is willing to win one item only if he also wins another item" (Specification 6:4-5.) The Specification points out "sellers may be allowed similar capability to place constraints and modify the set of items to be sold." (Specification 15:5-6.)

As an example of Appellant's process, proposals can be generated based on constraints specified by the bidder and provided on a user interface (Fig. 2) where the bidder can review, edit, or reject the proposal. (Specification 17:7-9, see Fig. 6.) The proposals are generated by way of an integer program solver (Fig. 4) which formulates winning bids based on information about the constraints input through the user interface. (Specification 8:9-10.) Formulas that include bid constraint variables are described in the Specification (pp. 9-11.) In this way, "participants can specify constraints that describe or characterize the combination of items they desire to win or sell." (Specification 3:13-14.)

Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A computer implemented method for an auction comprising:
 - establishing an auction system;
 - receiving at least one constraint specified by a participant in the auction, wherein the constraint characterizes combinations of items desired by the participant within the auction system; and
 - determining a winner in the auction, based on the constraint specified by the participant.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Ausubel	US 5,905,975	May 18, 1999
Macready	US 2002/0016759 A1	Feb. 7, 2002
McAfee	US 6,718,312 B1	Apr. 6, 2004

The following rejections are before us for review¹:

1. Claims 1-2, 6-7, and 11-19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ausubel.²
2. Claim 3-5 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ausubel in view of McAfee.
3. Claims 8-10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ausubel in view of Macready.

ISSUES

The first issue before us is whether the Appellant has shown that the Examiner erred in rejecting claims 1, 2, 6, 7, 11, 12, 14-19 as unpatentable over Ausubel. This issue turns on whether Ausubel shows the use of a “constraint” as claimed such that it would have led one having ordinary skill

¹ In reviewing these rejections, we have considered Appellant’s Appeal Brief (“App. Br.,” filed Jul. 10, 2006), the Examiner’s Answer (“Answer,” mailed Oct. 20, 2006), and the Reply Brief (“Reply Br.,” filed Nov. 21, 2006).

² The February 8, 2006 Final Rejection characterized this rejection as one of anticipation under 35 U.S.C. § 102(b) (Final Rejection 2), but the text of the rejection included analysis of obviousness. The rejection in the Answer at 3 changed the statement of the rejection to be under obviousness. Accordingly, we treat the rejection as under obviousness.

in the art to determine a winner in an auction, based on the “constraint” specified by the participant. Another issue, applicable to claim 13, is whether Ausubel shows “generating a proposal, based on the constraints specified by the participant, using a column generation formulation” as claimed such that it would have led one having ordinary skill in the art to a program medium with instructions to perform such a step.

The second issue before us is whether the Appellant has shown that the Examiner erred in rejecting claims 3-5 as unpatentable over Ausubel in view of McAfee. This issue turns on whether the prior art would have led one having ordinary skill in the art to a method wherein the “constraints characterize combinations of bids from the participant for the desired items within the auction system,” as claimed.

The third issue before us is whether the Appellant has shown that the Examiner erred in rejecting claims 8-10 as unpatentable over Ausubel in view of Macready. This issue turns on whether the prior art would have led one having ordinary skill in the art to a method that provides that the seller constraints, for which auction system is enabled to be responsive, specify a minimum value for a combination of items.

FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

Claim construction

1. Claim 1 is directed to a computer implemented method that comprises “receiving at least one *constraint* specified by a participant in [an] auction, wherein the *constraint* characterizes combinations of items desired by the participant within the auction system; and determining a winner in the auction, based on the *constraint* specified by the participant.” (Emphasis added.)
2. The customary and ordinary meaning of “constraint” is a confinement or restriction (see *Webster’s New World Dictionary*, 3rd College Ed., 299 (1988) definition 1: “a constraining or being constrained; specif., a) a confinement or restriction b) compulsion or coercion”).
3. The Specification does not provide a meaning for “constraint” that differs from the customary and ordinary meaning of the word.
4. The Specification explains constraints this way: “there is a need for methods through which participants can specify constraints that describe or characterize the combination of items they desire to win or sell, as well as a need for methods to solve the winner determination problem in auction systems that permit participants to specify such constraints.” (Specification 3: 12-15.) In other words, the term “constraints” is used to refer to auction participants’ desires for what they want to win or sell; that is, the “constraints” are restrictions placed on the auction. One such restriction may be “the total amount the bidder is willing to pay for a collection of items on which he has placed bids.” (Specification 5:13-14.) This is an example of a “*budget constraint*.”

(Specification 5:13.) Constraints are indicated on the user interface by the participant prior to winning bids being formulated.

(Specification 7:10 to 8:10.) Constraints are factors to be considered in selecting winning bids and are independent of auction authorization rules. (Specification 15:7-11.)

The scope and content of the prior art

5. Ausubel is directed to computer implemented methods and systems for executing auctions. The system comprises an auctioneer's system and a user's system whereby the auctioneer's system receives bid information entered by the bidder into the user system. (See Fig. 1.)
6. The Ausubel process comprises the auctioneer's system communicating messages to the user systems to initiate an auction. (Ausubel 2:30-35.) "The users may thereafter enter flexible bid information." (Ausubel 2:37.)
7. The flexible bid information that users input via the user system can include a scalar-value, vector-value or a function. The flexible bid information may be an expression of how many units of object(s) a bidder is willing to purchase at a given price(s), how much money a bidder is willing to pay for the purchase of a given object(s), or any other expression of the willingness-to-pay or value which a bidder places on object(s). Optionally, a bidding rule may also include a limitation (e.g. "I desire up to a quantity of x at a price P, but I do not want any positive quantity at all unless I receive a minimum quantity of y"). Thus, a bidding rule may include an unconditional bid or a contingent bid, and may consist of a function from available

information to bid quantities (e.g. a function of the previous bid(s) submitted).

(Ausubel 2:38-50.)(See also Ausubel 6:50-63.)

8. The flexible bid information is stored in databases accessed by the auctioneer's system. (Ausubel 2:52-53.) A database process performs database look-ups for data relevant to questions and generates answers through calculations and/or logical operations which are sent to the auctioneer's system. (Ausubel 8:66 to 9:4.) "Depending upon the particular auction involved and the answers, the auctioneer's system may conclude that the auction has been concluded and send a final message to one or more users."
(Ausubel 9:10-13.)
9. McAfee relates to "computer implementations of simultaneous auctions of multiple items, wherein combinatorial bidding is permitted ... [using] bid composition restrictions." (1:7-11.)
10. Macready relates to methods and systems for discovering trades between parties to uncover improved win-win agreements by exploiting the flexibilities and trade-offs of the buyers and sellers. [0002]-[0003] The Macready process permits constraints on the trade to be expressed by buyers and sellers [0077] as well as suppliers [0110].

Any differences between the claimed subject matter and the prior art

11. The claimed system combines various features separately disclosed in the prior art into one system.

The level of skill in the art

12. Neither the Examiner nor Appellants has addressed the level of ordinary skill in the pertinent arts of tracking items and data formatting. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (Quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

Secondary considerations

13. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Claim construction

“The Patent and Trademark Office (“PTO”) determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’”

In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004).

“The problem is to interpret claims ‘in view of the specification’ without unnecessarily importing limitations from the specification into the claims.”

E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369 (Fed. Cir. 2003).

Claims define the subject matter Appellants regard to be their invention. *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971). The burden of defining the invention lies with Appellants, not the PTO. *Id.* at 1056. Appellants have the opportunity to amend the claims during prosecution. Thus, a broad interpretation by the Examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969). Words in claims “are generally given their ordinary and customary meaning” to a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir. 1996)). How a person of ordinary skill in the art understands a claim term “is based on the well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art.” *Id.* at 1313. When interpreting a claim, unless the inventor has set forth a definition for a term, that term will be given its ordinary and customary meaning as understood by one skilled in the pertinent art. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Obviousness

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of

underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) The Court in *Graham* further noted that evidence of secondary considerations “might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” 383 U.S. at 18.

ANALYSIS

Rejection of claims 1, 2, 6, 7, and 11-19 as unpatentable over Ausubel.

Claim 1

The Examiner found that Ausubel discloses a computer-implemented auction system which receives at least one constraint specified by a participant characterizing a combination of items the participant desires and transactions resulting from the auction. (Answer 3.) However, the Examiner further found that “Ausubel does not explicitly disclose determining a winner in the auction, based on the constraint specified by the participant.” (Answer 3.) The Examiner relied on the knowledge of those with ordinary skill in the art, that transactions which result from auctions are “winners,” and thus the Examiner concluded that “it would have been obvious to an ordinary practitioner of the art at the time of Applicant’s invention to have combined the art of Ausubel with the common understanding about transactions and particularly about transactions

resulting from an auction process, motivated by a desire to offer and implement improved auction methods.” (Answer 4.)

The Appellant argues that “Ausubel does not teach or suggest *“determining a winner in the auction, based on the constraint specified by the participant.”*” (App. Br. 7; see also Reply Br. 10.) In particular, the Appellant contends that the Examiner has misconstrued the term “constraint” as used in the claim. (App. Br. 7.) According to the Appellant, “the claimed invention may allow ‘the winner determination problem’ to be formulated as an integer program (e.g., including the constraints specified by a participant in the auction) which can be solved by commercially available software packages (Application at page 1, lines 5-7).” (App. Br. 7.) Accordingly, the Appellant takes the position that the term “constraints” should be construed as “is used in the field of mathematics” (App. Br. 8) and that this is the commonly accepted meaning in the art and consistent with the meaning of the term as used in the Specification (App. Br. 7.) In that regard, the Appellant contends that Ausubel employs bidding rules, not constraints as used in the claim. “[N]owhere does Ausubel teach or suggest that his ‘bidding rules’ are used to [sic] as a constraint to solve an ‘integer program.’” (App. Br. 9.)

The Appellant also argues that “the Ausubel system is unrelated to the claimed invention. Indeed, Ausubel discloses that the bidders are required to express combinatorial bids.” (App. Br. 9.) According to the Appellant, “[t]he claimed invention, on the other hand, does not necessarily require the bidders to express combinatorial bids.” (App. Br. 9.)

We do not find the Appellant’s arguments persuasive.

The Appellant argues that the term “constraints” as used in the claims is different from the bidding rules used in Ausubel. The Specification makes clear that the constraints used by the invention are independent of bidding rules used during an auction (FF 4). However, we see little if any difference between the constraints used by claimed method and Ausubel’s bidding rules. Notwithstanding that Ausubel never uses the term “constraints” but rather refers to “bidding rules,” Ausubel’s bidding rules are constraints placed by auction participants as part of the process leading to the winning bid (FF 8). For example, Ausubel describes, as an example of a bidding rule, “an expression of ... how much money a bidder is willing to pay for the purchase of a given object(s)” (FF 7). This is a “budget constraint” as the Specification defines it (FF 4: “the total amount the bidder is willing to pay for a collection or items on which he has placed bids.”) The evidence does not support Appellant’s contention that a distinction exists between the claimed “constraint” and Ausubel’s “bidding rule.” Accordingly, the Appellant’s argument that Ausubel does not teach or suggest determining a winner in the auction, based on the *constraint* specified by the participant is not persuasive as to error in the rejection.

Appellant’s argument that the Ausubel system is unrelated to the claimed invention because it discloses that the bidders are required to express combinatorial bids is not commensurate in scope with what is claimed. The scope of claim 1 is such that it broadly encompasses combinatorial bids. “Many of appellant’s arguments fail from the outset because, . . . they are not based on limitations appearing in the claims” *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

Claim 13

The issue with respect to claim 13 is whether Ausubel shows “generating a proposal, based on the constraints specified by the participant, using a column generation formulation” as claimed such that it would have led one having ordinary skill in the art to a program medium with instructions to perform such a step.

The Examiner found that

Ausubel suggests generating a proposal, based on the constraints specified by the participant, using a column generation formulation (Fig. 3D displays bid data in a column. Making use, analyzing and displaying data in columns and matrices has been a basic display for a long time. It is also a technique used in mathematical and computer software analytical and parsing techniques). Therefore, it would have been obvious to the ordinary practitioner of the art at the time of Applicant’s invention to have combined the art of Ausubel to for the purpose of executing a program in a computer system for operating an auction with machine readable instructions and making use of column generation techniques, motivated by a desire to offer and implement improved auction methods (Ausubel, Col. 1, ll. 15-16).

(Answer 5.)

The Appellant rests on statements made with respect to the rejection of claim 1. In that regard, given that we have not found the Appellant’s argument persuasive as to error in the rejection of claim 1, we reach the same conclusion with respect to the argument as it applies to claim 13.

(App. Br. 11.)

The Appellant also argues that the Examiner improperly equates the claimed “column generation formulation” with Ausubel’s disclosure in Fig.

3D showing displaying bid data in a column because “in the field of mathematics, the term ‘column generation’ may be defined as an algorithm for solving linear programs” (App. Br. 12.) The Appellant states that “the Specification uses the term ‘column generation’ in a similar manner [as used in the field of mathematics] (e.g., see Application at page 12, line 6 – page 13, line 22).” (App. Br. 12.) Accordingly, the Appellant finds “the Examiner’s analysis is superficial and overly simplistic.” (App. Br. 12.) (See also Reply Br. 3-4.)

We do not find this argument persuasive as to error in the rejection. We have reviewed page 12, line 6 – page 13, line 22. While we see reference to “column generation formulation” in that disclosure, and it is used there in a mathematical algorithm context, the phrase is not otherwise defined. Nor is there any suggestion there or anywhere else in the Specification that the phrase should take on only the algorithmic meaning used in the field of mathematics. “The problem is to interpret claims ‘in view of the specification’ without unnecessarily importing limitations from the specification into the claims.” *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003). In that regard, the Appellant contends that the Examiner construes the term “column generation” in a manner that is contrary to its common usage in the art. (App. Br. 11-12.) However, the Appellant has provided no evidence to support that view. Appellant's arguments in a brief cannot take the place of evidence. *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974). *See also In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Furthermore, notwithstanding the Examiner’s reliance on Fig. 3D of Ausubel, the Examiner also found that “Making use, analyzing

and displaying data in columns and matrices has been a basic display for a long time. It is also a technique used in mathematical and computer software analytical and parsing techniques” (Answer 5.) Accordingly, the Examiner relied not just on Ausubel but also that the claimed “column generation formulation” was well known in the art. Nowhere in the Brief has the Appellant challenged this position. An adequate traversal of the Examiner’s position would contain information or argument to create on its face a reasonable doubt regarding the circumstances justifying Examiner’s notice of what is well known to one of ordinary skill in the art. *In re Boon*, 439 F.2d 724, 728 (CCPA 1971). That has not been done here.

Claims 2, 6, 7, 11, 12, 14-19

The Appeal Brief (e.g., pp. 12-17) indicates, without further discussion, that various features set forth in these claims are absent from the references. But the Examiner had clearly explained where the subject matter of these claims were shown in Ausubel. (Answer 4-6.) A general allegation that the art does not teach any of the claim limitations is no more than merely pointing out the claim limitations. A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. 37 C.F.R. § 41.37(c)(1)(vii) (2007). The Appellant also rests on statements made with respect to the rejection claim 1. In that regard, given that we have not found the Appellant’s argument persuasive as to error in the rejection of claim 1, we reach the same conclusion with respect to the Appellant’s argument as to the rejection of these claims.

Rejection of claim 3-5 as unpatentable over Ausubel in view of McAfee.

Claim 3 further limits the process of claim 1 by providing that the “constraints characterize combinations of bids from the participant for the desired items within the auction system.”

The Examiner found that

Ausubel does not explicitly disclose a method wherein the constraints characterize combinations of bids from the participant for the desired items within the auction system. However, Ausubel does in fact teach and suggest the use of constraints and the combination of items desired by participants by participants in an auction process (see the rejection of claim 1). Further, McAfee discloses a method wherein the constraints characterize combinations of bids from the participant for the desired items within the auction system (Abstract, l. 8, Col. 1, l. 9, Col. 5, ll. 19-20; Col. 9, ll. 66-67) ... that eliminate associated bidding problems (McAfee, Col. 9, ll. 59-63).

(Answer 6.)

The Appellant argues that (a) Ausubel and McAfee are so disparate that one of ordinary skill in the art would not have combined their teachings absent hindsight; i.e., the references are non-analogous, (b) the Examiner points to no motivation in the references, and (c) in McAfee, the restrictions are placed by the auctioning organization and apply to all bidders. (App. Br. 18-19.)

We do not find the Appellant’s arguments persuasive.

We do not see that Ausubel and McAfee are so disparate from each other. Given that they are both related to computer automated auctions and thus related to the claimed invention, one of ordinary skill in the art of auctions would find they are analogous. When a person having ordinary skill

in the art would consider it relevant or related to the invention sought to be patented then the prior art is “analogous.” *See Dann v. Johnston*, 425 U.S. 219, 229 (1976).

We disagree that the examiner has failed to point to any motivation in the references. The Examiner clearly pointed to col. 9, ll. 59-63 of McAfee. (Answer 6.) Nevertheless, in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007)., the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739 and discussed circumstances in which a patent might be determined to be obvious without an explicit application of the teaching, suggestion, motivation test. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739 (citing *Graham*, 383 U.S. at 12 (emphasis added)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* The Supreme Court made clear that “[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.” *Id.* The Court explained,

[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

Id. at 1740-41. The Court noted that “[t]o facilitate review, this analysis should be made explicit. *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 1741. Here the Examiner articulated a reason with some rational underpinning to support the legal conclusion of obviousness.

The argument that McAfee's restrictions are placed by the auctioning organization and apply to all bidders is the same argument the Appellant made against Ausubel. The Examiner did not rely on McAfee to show this limitation of the claim. The Examiner relied on Ausubel. We addressed that *supra* with respect to the rejection of claim 1. Ausubel shows determining a winner in the auction based on a constraint specified by a participant to the extent claimed.

Claims 4 and 5

The Appeal Brief (e.g., pp. 19-20) indicates that, for these claims, the Appellant incorporates the arguments made with respect to the rejection of claim 3. In that regard, given that we have not found the Appellant's argument persuasive as to error in the rejection of claim 3, we reach the same conclusion with respect to the Appellant's arguments as to the rejection of these claims.

Rejection of claims 8-10 as unpatentable over Ausubel in view of Macready.

Claim 8

Claim 8 further limits the process of claim 1 by providing that the seller constraints, for which auction system is enabled to be responsive (claim 7), specify a minimum value for a combination of items.

The Examiner found that "Ausubel does not explicitly disclose a method wherein the seller constraints specify a minimum value for a combination of items. However, Macready discloses a method wherein the seller constraints specify a wide range of parameter possibilities (Page 6, [0077]; [0018]-II. 1-2; [0110])." (Answer 7.) The Examiner determined that

[i]t would have been obvious to the ordinary practitioner at the time of applicant's invention that these possibilities

suggest the imposition of a constraint specifying a minimum value. Such a value would be based on the participant's assessment that he would be worse off to engage in a transaction below such a minimum value). Hence it would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of Macready to be responsive to seller constraints such as minimum value for a combination of items, motivated by the desire to offer flexibility to all trading partners to locate win-win opportunities for all parties if they exist (Macready, page 2, [0012] ll. 7-9).

(Answer 7-8.)

The Appellant argues that (a) Ausubel and Macready are so disparate that one of ordinary skill in the art would not have combined their teachings absent hindsight; i.e., the references are non-analogous, (b) the Examiner points to no motivation in the references, and (c) Macready does not teach or suggest determining a winner in the auction, based on the constraint specified by the participant. (App. Br. 21-22.)

We do not find the Appellant's arguments persuasive.

We do not see that Ausubel and Macready are so disparate from each other that one of ordinary skill would not look to the computerized trading system of Macready to modify Ausubel's computerized auction. Given that they are both related to computer automated transactions involving buyers and sellers and thus related to the claimed invention, one of ordinary skill in the art of auctions would find they are analogous. When a person having ordinary skill in the art would consider it relevant or related to the invention sought to be patented then the prior art is "analogous." *See Dann v. Johnston*, 425 U.S. 219, 229 (1976). Notwithstanding whether the prior art

is analogous, “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or [in] a different one. If a person of ordinary skill [in the art] can implement a predictable variation, § 103 likely bars its patentability.” *KSR*. at 1740.

We disagree that the examiner has failed to point to any motivation in the references. The Examiner clearly pointed to page 2, [0012] ll. 7-9 of Macready. (Answer 6.) Nevertheless, as we stated earlier, in *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739 and discussed circumstances in which a patent might be determined to be obvious without an explicit application of the teaching, suggestion, motivation test. “[T]he analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 1741. Here the Examiner articulated a reason with some rational underpinning to support the legal conclusion of obviousness.

The argument that Macready does not teach or suggest determining a winner in the auction, based on the constraint specified by the participant, is the same argument the Appellant made against Ausubel. The Examiner did not rely on Macready to show this limitation of the claim. The Examiner relied on Ausubel. We addressed that *supra* with respect to the rejection of claim 1. Ausubel shows determining a winner in the auction based on a constraint specified by a participant to the extent claimed.

Claim 9

Claim 9 further limits the process of claim 1 by providing that the seller constraints, for which auction system is enabled to be responsive (claim 7), specify a minimum value for a combination of a minimum number of items to be sold.

The Appellant argues that “Macready makes no reference to the seller constraints specifying any of a minimum value for a combination of items, or a minimum number of items to be sold, or a minimum value for a combination of items correlated to a precedence relationship, as in claims 8-10. Rather, Macready merely notes that “[b]uyers and sellers may express constraints over both continuous and discrete variables,” (Macready at page 6, paragraph [0077]) and that “a seller [may] express additional linear constraints” (Macready at page 8, paragraph [0108]).” (App. Br. 22.)

We do not find the Appellant’s argument persuasive as to error in the rejection of claim 9. The Appellant fails to address the Examiner’s point that “[t]he ordinary practitioner would have seen it as obvious that minimum values could easily be involved in auctions which involve multiple items and in which the seller(s)’s constraints permit or perhaps even require bidding on a combination of items.” (Answer 8.) In effect, the Examiner is arguing that one skilled in the art would have known that minimum values and bidding on multiple items are among the constraints a seller might set. The Brief does not challenge this.

Claim 10

The Appeal Brief (pp. 22-23) indicates that, for this claim, the Appellant incorporates the arguments made with respect to the rejection of

claim 9. In that regard, given that we have not found the Appellant's argument persuasive as to error in the rejection of claim 9, we reach the same conclusion with respect to the Appellant's arguments as to the rejection of claim 10.

New Ground of Rejection

We enter a new ground of rejection under 35 U.S.C. § 103 of claims 1-12 and 14-19 in light of the recent decision in *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007). The claimed process is a computer-implemented method for facilitating an auction. But for the mention of a computer in the preamble of the claim, the steps set forth in the claims would, absent the presence of a computer, recite wholly mental steps. *Comiskey* established that "the application of human intelligence to the solution of practical problems is not in and of itself patentable." *Id.* at 1379.

The Supreme Court has reviewed process patents reciting algorithms or abstract concepts in claims directed to industrial processes. In that context, the Supreme Court has held that a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as employed in the process, it is embodied in, operates on, transforms, or otherwise involves another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter. 35 U.S.C. § 101.

Id. at 1376. The instant claims are arguably directed to statutory subject matter because the steps are embodied in another class of statutory subject matter, i.e., a computer. "When an unpatentable mental process is combined with a machine, the combination may produce patentable subject matter" *Id.* at 1379. However, "[t]he routine addition of modern electronics to an

otherwise unpatentable invention typically creates a prima facie case of obviousness.” *Id.* at 1380.

If prosecution should continue, the Examiner may also want to consider whether the claims should be rejected under the second paragraph of 35 U.S.C. § 112 in light of the recent decision in *Halliburton Energy Services, Inc. v. M-I LLC*, 2007-1149, decided January 25, 2008 (Fed. Cir. 2008). The dispute over the patentability of the claims has been over the meaning to be given certain claim terms (e.g., “column generation formulation” in claim 13). Central to that dispute is a debate over the ordinary and customary usage of these terms. Given the Appellant’s insistence that the Examiner has improperly construed the terms on the ground that the Examiner applied a meaning to these terms that an ordinary artisan would not commonly use but without providing evidence establishing what these terms would mean to the ordinary artisan, the Examiner could argue that the disputed terms lack clear meaning to the ordinary artisan and are thus insolubly ambiguous. (*Id.* at page 7.) A similar concern could be raised with respect to the meaning of the claim terms “characterizes” and “based on” that depend on the meaning of the term “constraint,” the meaning of which has been in dispute.

CONCLUSIONS OF LAW

We conclude the Appellant has failed to show that the Examiner erred in rejecting claims 1-2, 6-7, and 11-19 as unpatentable over Ausubel, in rejecting claims 3-5 as unpatentable over Ausubel in view of McAfee, and in

rejecting claims 8-10 as unpatentable over Ausubel in view of Macready.
We enter a new ground of rejection under 35 U.S.C. §103 of claims 1-12 and 14-19.

DECISION

The decision of the Examiner to reject claims 1-19 is affirmed.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the appellant, **WITHIN TWO MONTHS FROM THE DATE OF THE DECISION**, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner
- (2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED; 37 C.F.R. § 41.50(b)

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MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817